



# National Resources Inventory 2003 Annual NRI

## Water (Sheet & Rill) and Wind Erosion on Cropland

February 2007

Estimates presented here are based upon the latest information from the National Resources Inventory (NRI). The NRI is a longitudinal sample survey based upon scientific statistical principles and procedures. It is conducted by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS), in cooperation with Iowa State University's Center for Survey Statistics and Methodology. These results are based upon the 2003 Annual NRI, which statistically updates 1997 NRI results with data collected during 2000 – 2003. The NRI was conducted on a five-year cycle during the period 1982 to 1997, but now is conducted annually. NRI data were collected every five years for 800,000 sample sites; annual NRI data collection occurs at slightly less than 25 percent of these same sample sites. Current estimates cover the contiguous 48 states. Future estimates will include Hawaii, Alaska, the Caribbean, and selected Pacific Basin islands.

NRI data release procedures are affected by implementation of an annual data collection approach, because the scale of NRI estimates is affected by these reduced sample sizes. Estimates are being released when they meet NRI statistical standards and are scientifically credible in accordance with NRCS policy, and in accordance with OMB and USDA Quality of Information Guidelines.

The 2003 Annual NRI data are suitable for national, many regional, and some state level analyses. Selected state-level results are reported here. These results will be supplemented in early to mid 2007 with additional estimates that compare net change with previous inventories.

Until these supplements are released, direct comparisons between 1997 and 2003 NRI estimates to determine change or trends will produce incorrect inferences and is scientifically invalid because:

1. There have been improvements in statistical estimation techniques and procedures between 1997 and 2003.
2. Data from previous inventory cycles were reviewed (edited) concurrently with the 2003 NRI data collection effort.

Margins of error are reported for each NRI estimate and must be considered at all scales of analysis. The margin of error is used to construct the 95 percent confidence interval for the estimate. The lower bound of the interval is obtained by subtracting the margin of error from the estimate; the upper bound is obtained by adding the margin of error to the estimate. A 95 percent confidence interval means that in repeated samples from the same population, 95 percent of the time the true underlying population parameter will be contained within the lower and upper bounds of the interval. In the following tables, an asterisk (\*) replaces the estimate if the margin of error is greater than the estimate. If the margin of error is greater than the estimate, the confidence interval includes zero, and the estimate should not be used.

**2003 Water (Sheet & Rill) and Wind Erosion on Cropland by State, with Margins of Error**

State	Water Erosion in Thousands of Tons per Year	Water Erosion in Tons per Acre per Year	Wind Erosion in Thousands of Tons per Year	Wind Erosion in Tons per Acre per Year
Alabama	12932.5 ±1667.9	5.2 ±0.5	0.0 ±0.0	0.0 ±0.0
Arizona	547.2 ±121.8	0.6 ±0.1	8319.7 ±2447.8	8.9 ±2.2
Arkansas	23672.1 ±1705.9	3.1 ±0.2	0.0 ±0.0	0.0 ±0.0
California	3178.0 ±943.2	0.3 ±0.1	*	*
Colorado	13031.6 ±1806.1	1.6 ±0.1	86731.0 ±14241.9	10.4 ±1.3
Connecticut	438.0 ±176.3	2.5 ±1.0	0.0 ±0.0	0.0 ±0.0
Delaware	906.2 ±165.7	2.0 ±0.3	0.0 ±0.0	0.0 ±0.0
Florida	3859.1 ±1152.4	1.3 ±0.4	0.0 ±0.0	0.0 ±0.0
Georgia	19467.2 ±1754.6	4.7 ±0.4	0.0 ±0.0	0.0 ±0.0
Idaho	12218.5 ±1248.7	2.2 ±0.2	15546.5 ±2825.6	2.9 ±0.5
Illinois	95783.7 ±4353.8	4.0 ±0.2	0.0 ±0.0	0.0 ±0.0
Indiana	42056.5 ±2652.8	3.2 ±0.2	3885.3 ±718.4	0.3 ±0.1
Iowa	128581.1 ±5063.1	5.0 ±0.2	10886.4 ±1119.8	0.4 —

State	Water Erosion in Thousands of Tons per Year	Water Erosion in Tons per Acre per Year	Wind Erosion in Thousands of Tons per Year	Wind Erosion in Tons per Acre per Year
Kansas	55210.5 ±2617.6	2.1 ±0.1	35449.3 ±2846.1	1.3 ±0.1
Kentucky	13285.4 ±1357.4	2.4 ±0.2	0.0 ±0.0	0.0 ±0.0
Louisiana	16734.9 ±1162.1	3.1 ±0.2	0.0 ±0.0	0.0 ±0.0
Maine	527.7 ±244.8	1.4 ±0.6	0.0 ±0.0	0.0 ±0.0
Maryland	5520.7 ±849.0	3.6 ±0.5	0.0 ±0.0	0.0 ±0.0
Massachusetts	235.7 ±90.5	0.9 ±0.3	0.0 ±0.0	0.0 ±0.0
Michigan	11845.6 ±846.6	1.5 ±0.1	13898.3 ±1661.6	1.7 ±0.2
Minnesota	36867.2 ±2891.1	1.7 ±0.1	92339.2 ±6551.9	4.4 ±0.3
Mississippi	22901.2 ±2064.5	4.6 ±0.3	0.0 ±0.0	0.0 ±0.0
Missouri	56533.3 ±3629.2	4.1 ±0.2	0.0 ±0.0	0.0 ±0.0
Montana	16670.8 ±1797.0	1.1 ±0.1	42739.1 ±4727.9	2.9 ±0.3
Nebraska	51248.9 ±4182.8	2.6 ±0.2	32034.8 ±5764.0	1.6 ±0.3
Nevada	32.6 ±19.1	0.1 —	2203.3 ±1693.5	3.5 ±2.5
New Hampshire	93.0 ±34.8	0.7 ±0.2	0.0 ±0.0	0.0 ±0.0

State	Water Erosion in Thousands of Tons per Year	Water Erosion in Tons per Acre per Year	Wind Erosion in Thousands of Tons per Year	Wind Erosion in Tons per Acre per Year
New Jersey	1860.6 ±443.4	3.5 ±0.9	0.0 ±0.0	0.0 ±0.0
New Mexico	1238.0 ±231.0	0.8 ±0.1	20047.7 ±4060.2	12.9 ±2.4
New York	11420.1 ±1491.9	2.1 ±0.3	0.0 ±0.0	0.0 ±0.0
North Carolina	16881.5 ±1497.7	3.1 ±0.2	0.0 ±0.0	0.0 ±0.0
North Dakota	32779.3 ±1267.2	1.4 ±0.1	117325.8 ±6364.0	4.8 ±0.2
Ohio	22938.3 ±1520.4	2.0 ±0.1	1592.4 ±228.8	0.1 —
Oklahoma	22874.8 ±1954.0	2.5 ±0.2	13221.2 ±1983.6	1.5 ±0.2
Oregon	5831.2 ±1086.2	1.6 ±0.2	5588.6 ±1935.9	1.5 ±0.5
Pennsylvania	18476.6 ±1624.4	3.6 ±0.3	0.0 ±0.0	0.0 ±0.0
Rhode Island	42.6 ±27.8	2.1 ±0.6	0.0 ±0.0	0.0 ±0.0
South Carolina	6556.3 ±745.8	2.8 ±0.2	0.0 ±0.0	0.0 ±0.0
South Dakota	31427.0 ±2582.4	1.8 ±0.1	34203.6 ±3364.9	2.0 ±0.2
Tennessee	16950.3 ±2145.3	3.6 ±0.4	0.0 ±0.0	0.0 ±0.0

State	Water Erosion in Thousands of Tons per Year	Water Erosion in Tons per Acre per Year	Wind Erosion in Thousands of Tons per Year	Wind Erosion in Tons per Acre per Year
Texas	64834.7 ±2463.5	2.5 ±0.1	190493.4 ±15099.6	7.5 ±0.6
Utah	1230.5 ±972.2	0.7 ±0.6	5010.8 ±1237.0	3.0 ±0.8
Vermont	792.6 ±169.5	1.4 ±0.3	0.0 ±0.0	0.0 ±0.0
Virginia	9763.8 ±1412.8	3.4 ±0.4	0.0 ±0.0	0.0 ±0.0
Washington	26341.0 ±3637.6	4.1 ±0.5	31429.6 ±6385.4	4.8 ±1.0
West Virginia	990.6 ±318.4	1.2 ±0.4	0.0 ±0.0	0.0 ±0.0
Wisconsin	31754.3 ±3003.1	3.1 ±0.2	1759.0 ±477.0	0.2 —
Wyoming	1184.9 ±355.4	0.5 ±0.1	6974.2 ±2221.0	3.2 ±0.8

Note: A \* indicates that the margin of error is greater than the estimate; a — indicates that the margin of error is less than .05 tons per acre per year.

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